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# INSTALLATION RESTORATION PROGRAM

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Final  
**DECISION DOCUMENT**  
**UST SITE 450**

117th Refueling Wing  
Alabama Air National Guard  
Birmingham Airport  
Birmingham, Alabama

January 1997



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DECISION DOCUMENT  
SITE UST 450

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ALABAMA AIR NATIONAL GUARD  
BIRMINGHAM AIRPORT  
BIRMINGHAM, ALABAMA

Submitted to:

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ANDREWS AIR FORCE BASE, MARYLAND

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U.S. DEPARTMENT OF ENERGY  
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## ACRONYMS

AANG	Alabama Air National Guard
ANG	Air National Guard
ANGRC	Air National Guard Readiness Center
DOD	Department of Defense
DOE	Department of Energy
GPR	Ground Penetrating Radar
HAZWRAP	Hazardous Waste Remedial Actions Program
IRP	Installation Restoration Program
NGB	National Guard Bureau
PA/SI	Preliminary Assessment/Site Investigation
RD/RA	Remedial Design/Remedial Action
RI/FS	Remedial Investigation/Feasibility Study
SI	Site Investigation
UST	Underground Storage Tank

## EXECUTIVE SUMMARY

As part of the Installation Restoration Program (IRP), the Air National Guard Readiness Center (ANGRC), previously known as the National Guard Bureau (NGB), and Alabama Air National Guard (AANG) requested field observation and sampling during the removal of Underground Storage Tank (UST) 450. The investigation was begun to determine the presence or absence of contamination and the risk to public health and environment, if any, associated with past operations at this site.

This document was prepared to review the available data, to evaluate alternative actions, to make recommendations concerning future action, and to fulfill the requirements and objectives of the National Environmental Policy Act.

The UST 450 site was investigated during the field survey task, but no tank was found.

Because no UST was found, it is recommended that this site be removed from further IRP activities and that no further action is required.

## 1. INTRODUCTION

The objectives of the Decision Document are to present the history of Underground Storage Tank (UST) 450 at Birmingham's Alabama Air National Guard (AANG) facility, to discuss observations made while investigating the tank, and to present conclusions and decisions about the disposition of the UST site. Decisions are based on regulations set forth in the site investigation (SI) work plan dated November 1989.

Figure 1 shows the general location of the AANG facility in Birmingham. Figure 2 shows the specific location of UST 450 on the base. Evaluations are based on criteria set forth in the Site Investigation Work Plan, Alabama Air National Guard (CH2M HILL, Inc., November 1989).

## 2. BACKGROUND

### 2.1 PROGRAM BACKGROUND

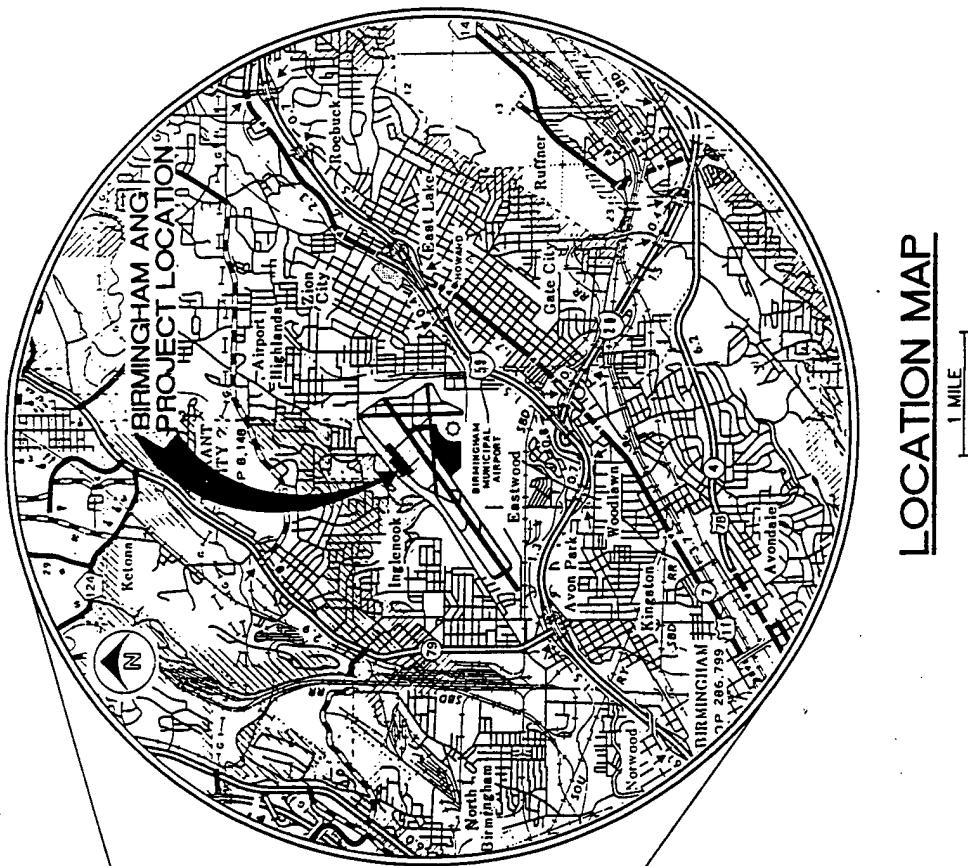
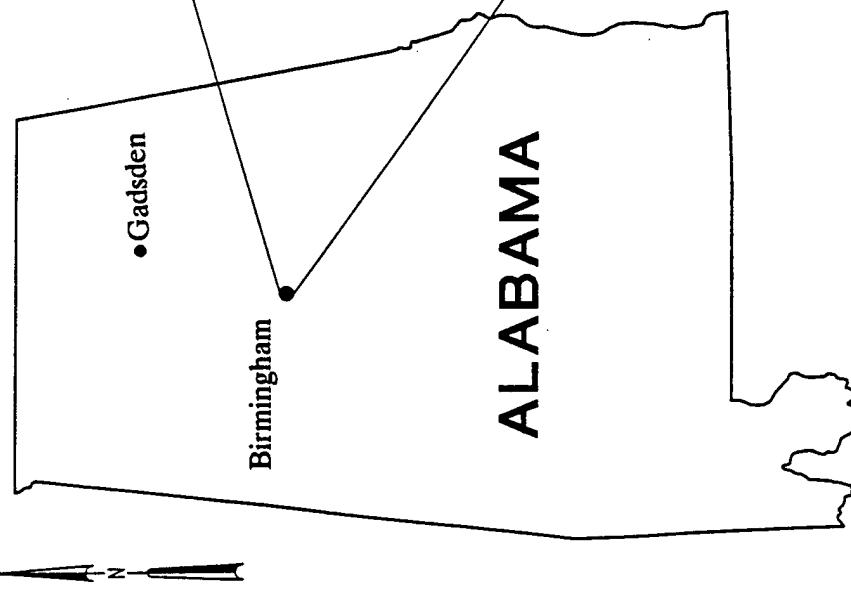
The Air National Guard Readiness Center (ANGRC), through the Air National Guard (ANG), initiated an Installation Restoration (IRP) in response to the policies of the Department of Defense (DOD). The IRP was developed as a phased program for identifying and addressing environmental contamination caused by past practices at ANG installations.

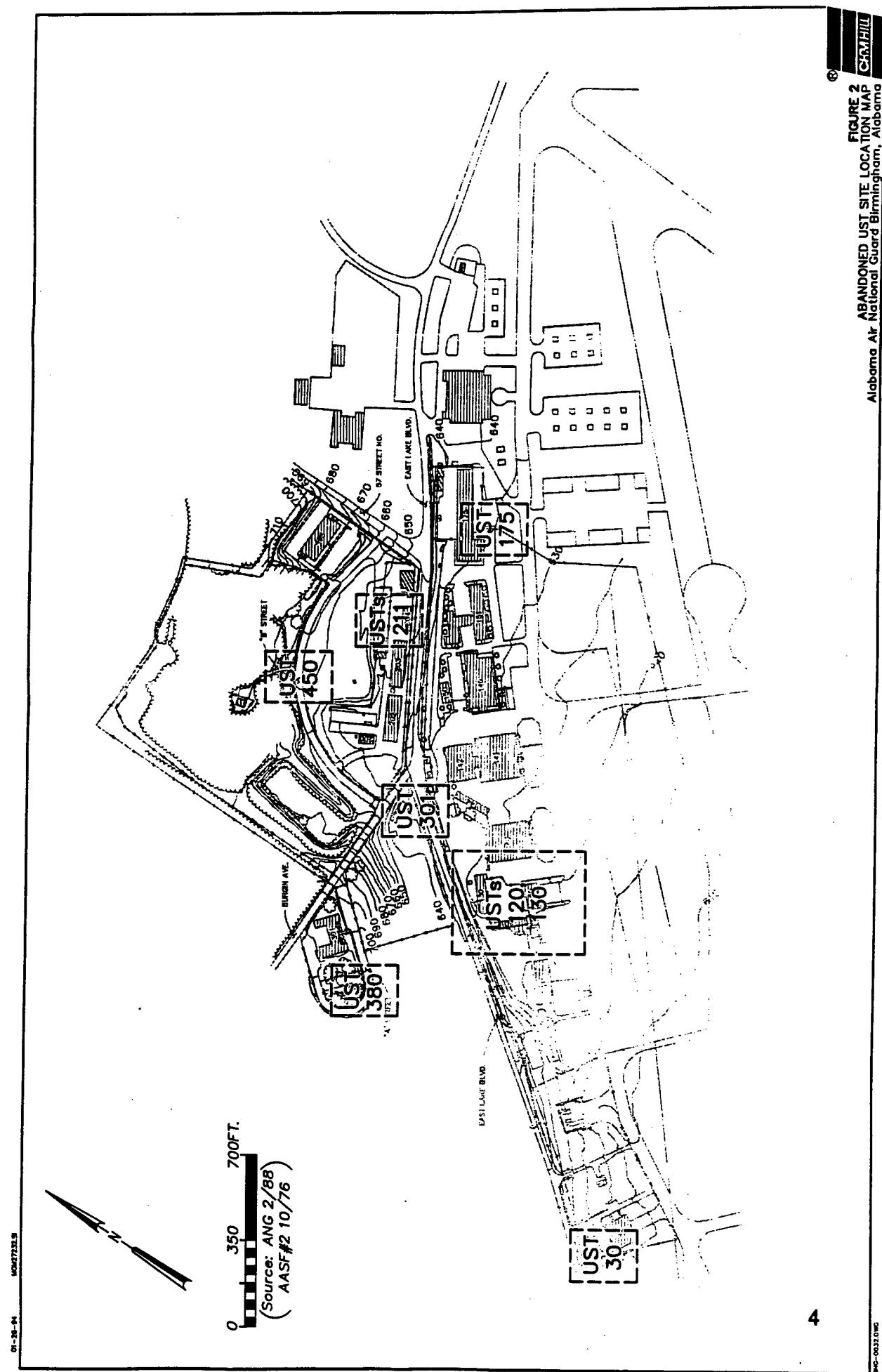
As a part of the IRP, the ANGRC entered into an interagency agreement with the Department of Energy (DOE), under which the DOE will provide technical assistance for implementing this program. The Hazardous Waste Remedial Actions Program (HAZWRAP), as a DOE contractor, is responsible for managing this effort under the interagency agreement.

The IRP, along with other national hazardous waste cleanup programs, follows the terminology and procedures of the National Contingency Plan:

- PA/SI      Preliminary Assessment/Site Investigation
- RI/FS      Remedial Investigation/Feasibility Study
- RD/RA      Remedial Design/Remedial Action

This Decision Document is written to provide the basis for the decision not to do any further work.





## **2.2 SITE DESCRIPTION**

The 117th Tactical Reconnaissance Wing is located next to and north of the Birmingham Municipal Airport, Birmingham, Alabama. This AANG installation has been active at its present location since 1938. Through the years, the base has had several missions, with past and present operations involving the use of USTs for containment of heating fuels, diesel fuels, and jet propulsion fuels.

UST 450's contents were unknown based on information found during the initial investigation of the AANG facility. Figure 3 shows the suspected location of UST 450.

## **2.3 ENVIRONMENTAL SETTING**

### **2.3.1 Geology**

The bedrock beneath the Base consists of the Ketona Dolomite and Knox Group. A mottled-colored cherty clay residuum, resulting from the dissolution of the bedrock, overlies dolomites of these units and averages 30 feet in thickness over the base. Some areas of the Base have visible outcrops of dolomite and chert boulders which are isolated in the clay residuum; chert float can be seen at the surface base-wide.

The residual cherty clays are generally homogeneous, although slight changes in the amount of chert, plasticity and stiffness are present. Dolomitic sand lenses are gravelly clays are present, generally occurring at the contact of clay and bedrock.

### **2.3.2 Hydrogeology**

The uppermost aquifer at the Base is the Knox aquifer. The top of the aquifer is the saturated permeable interface between the residual clay and the bedrock. The clay materials above the bedrock are also generally saturated at shallow depths, 10 to 15 feet below land surface. These clays generally do not yield significant quantities of water.

The direction of groundwater flow in both the clay residuum and the Knox is to the south; a downward vertical component exists in the clay residuum. Data from slug testing of monitoring wells completed in the clay indicate an average hydraulic conductivity of 9.02E-4 ft/day. Because of the low permeabilities exhibited by the residual clays, lateral transport is inhibited.

### **2.3.3 Water Utilization**

Drinking water in the Birmingham is provided by city/county utilities from surface water sources. The municipal water source nearest the Base is the Cahaba River, located approximately 20 miles to the east. Residences adjacent to the Base have been served by the municipal water system for about 60 years.

## **2.4 TANK REMOVAL OBSERVATIONS**

A program to evaluate abandoned USTs at the Birmingham AANG facility included identifying abandoned tank locations, sampling tank contents, preparing tank removal plans and specifications, removing tanks and contaminated soil, and evaluating investigation-derived wastes after the removal effort was complete.

During the Tank Survey Task to identify the location and sizes of the tank, magnetic devices and Ground Penetrating Radar (GPR) were used to identify tank boundaries and sizes. A concrete slab was found during this task in the suspected UST area and was further investigated by excavating a trench and tunnel to a distance of 7.5 feet under the slab. The UST was not found. Excavation determined that the results of the magnetic instrument survey were a result of feedback from shallow rock formations found approximately seven feet below ground surface.

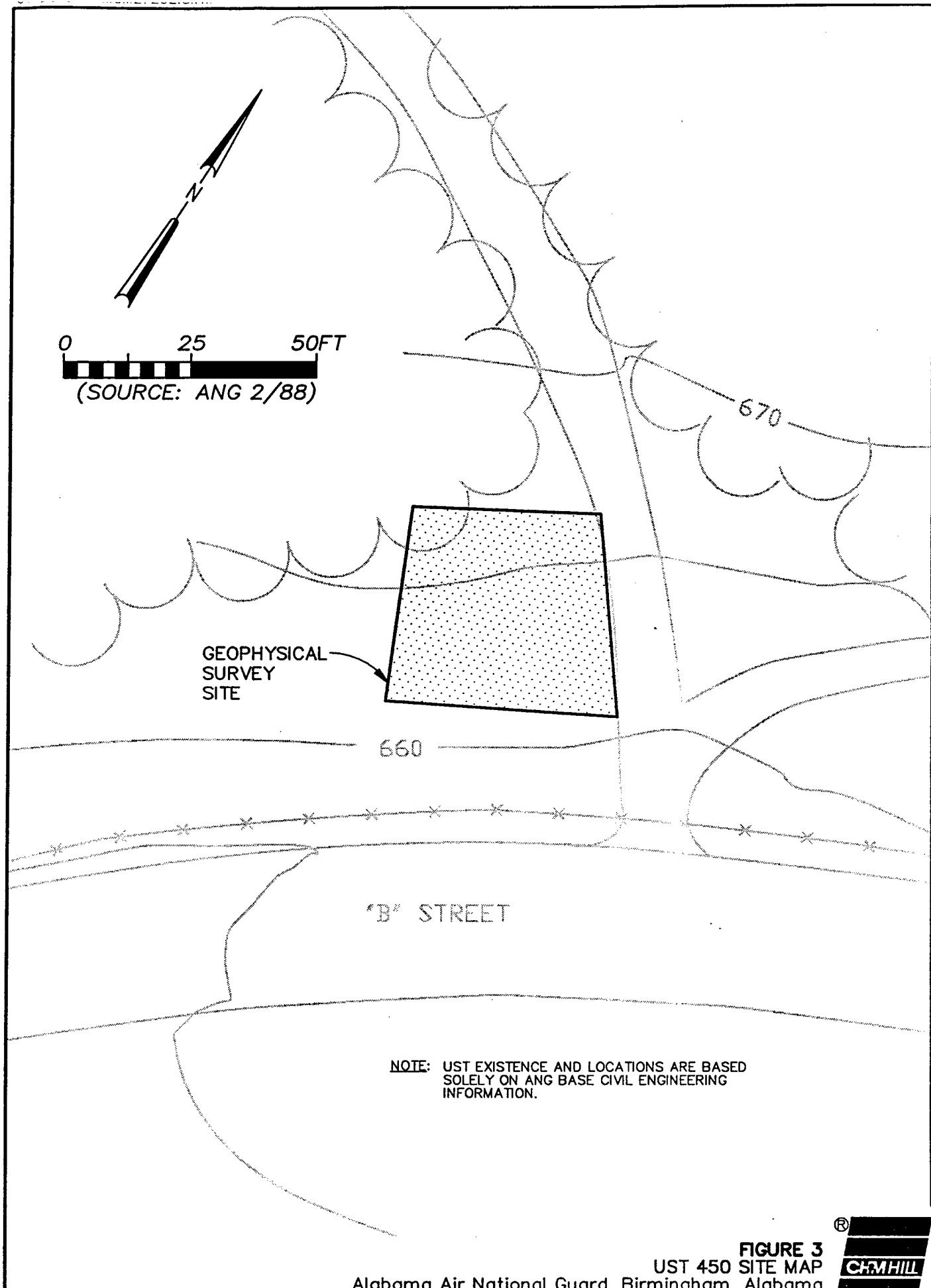
Further review of aerial photography and base records revealed minimal information about the UST 450 site. UST 450 was not found, and no further action was taken.

## **3. CONTROL MEASURES**

Because UST 450 was not found and therefore not included in the UST removal project, control measures used to consider adverse effects of potential contamination were not considered for screening, identification, and evaluation.

## **4. CONCLUSIONS**

Past operations at the UST 450 site led to this investigation because of possible soil and water contamination. A field survey task used to identify the UST location and size did not reveal the presence of a UST at this site.



Because no UST was found, it is recommended that this site be removed from further IRP activities and that no further action be taken.

Signature: \_\_\_\_\_ Date: \_\_\_\_\_

**DAVID C. VAN GASBECK**  
Chief, Environmental Division  
Air National Guard Readiness Center

Signature: \_\_\_\_\_ Date: \_\_\_\_\_

**Alabama Department of Environmental Management**